

[illegible]

**FIG. 1A**

|                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |     |
|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----|
| GAT<br>Asp<br>130 | TTT<br>Phe<br>130 | AAA<br>Lys<br>130 | GAA<br>Glu<br>135 | GAT<br>Asp<br>135 | GGA<br>Gly<br>135 | AAC<br>Asn<br>135 | ATT<br>Ile<br>135 | CTT<br>Leu<br>140 | GGA<br>Gly<br>140 | CAC<br>His<br>140 | AAA<br>Lys<br>140 | TTG<br>Leu<br>140 | GAA<br>Glu<br>140 | TAC<br>Tyr<br>140 | AAC<br>Asn<br>140 | 432 |
| TAT<br>Tyr<br>145 | AAC<br>Asn<br>145 | TCA<br>Ser<br>145 | CAC<br>His<br>145 | AAT<br>Asn<br>145 | GTA<br>Val<br>150 | TAC<br>Tyr<br>150 | ATC<br>Ile<br>150 | ATG<br>Met<br>150 | GCA<br>Ala<br>155 | GAC<br>Asp<br>155 | AAA<br>Lys<br>155 | CAA<br>Gln<br>155 | AAG<br>Lys<br>155 | AAT<br>Asn<br>155 | GGA<br>Gly<br>160 | 480 |
| ATC<br>Ile<br>158 | AAA<br>Lys<br>158 | GTT<br>Val<br>158 | AAC<br>Asn<br>165 | TTC<br>Phe<br>165 | AAA<br>Lys<br>165 | ATT<br>Ile<br>165 | AGA<br>Arg<br>165 | CAC<br>His<br>170 | AAC<br>Asn<br>170 | ATT<br>Ile<br>170 | GAA<br>Glu<br>170 | GAT<br>Asp<br>170 | GGA<br>Gly<br>170 | AGC<br>Ser<br>175 | GTT<br>Val<br>175 | 528 |
| CAA<br>Gln<br>180 | CTA<br>Leu<br>180 | GCA<br>Ala<br>180 | GAC<br>Asp<br>180 | CAT<br>His<br>180 | TAT<br>Tyr<br>185 | CAA<br>Gln<br>185 | CAA<br>Gln<br>185 | AAT<br>Asn<br>185 | ACT<br>Thr<br>185 | CCA<br>Pro<br>185 | ATT<br>Ile<br>185 | GGC<br>Gly<br>190 | GAT<br>Asp<br>190 | GGC<br>Gly<br>190 | CCT<br>Pro<br>190 | 576 |
| GTC<br>Val<br>195 | CTT<br>Leu<br>195 | TTA<br>Leu<br>195 | CCA<br>Pro<br>195 | GAC<br>Asp<br>195 | AAC<br>Asn<br>200 | CAT<br>His<br>200 | TAC<br>Tyr<br>200 | CTG<br>Leu<br>200 | TCC<br>Ser<br>205 | ACA<br>Thr<br>205 | CAA<br>Gln<br>205 | TCT<br>Ser<br>205 | GCC<br>Ala<br>205 | CTT<br>Leu<br>205 | TCG<br>Ser<br>205 | 526 |
| AAA<br>Lys<br>210 | GAT<br>Asp<br>210 | CCC<br>Pro<br>210 | AAC<br>Asn<br>210 | GAA<br>Glu<br>210 | AAG<br>Lys<br>215 | AGA<br>Arg<br>215 | GAC<br>Asp<br>215 | CAC<br>His<br>215 | ATG<br>Met<br>215 | GTC<br>Val<br>215 | CTT<br>Leu<br>220 | CTT<br>Leu<br>220 | GAG<br>Glu<br>220 | TTT<br>Phe<br>220 | GTA<br>Val<br>220 | 672 |
| ACA<br>Thr<br>225 | GCT<br>Ala<br>225 | GCT<br>Ala<br>225 | GGG<br>Gly<br>225 | ATT<br>Ile<br>225 | ACA<br>Thr<br>230 | CAT<br>His<br>230 | GGC<br>Gly<br>230 | ATG<br>Met<br>230 | GAT<br>Asp<br>235 | GAA<br>Glu<br>235 | CTA<br>Leu<br>235 | TAC<br>Tyr<br>235 | AAA<br>Lys<br>235 | TA                |                   | 716 |

FIG. 1B

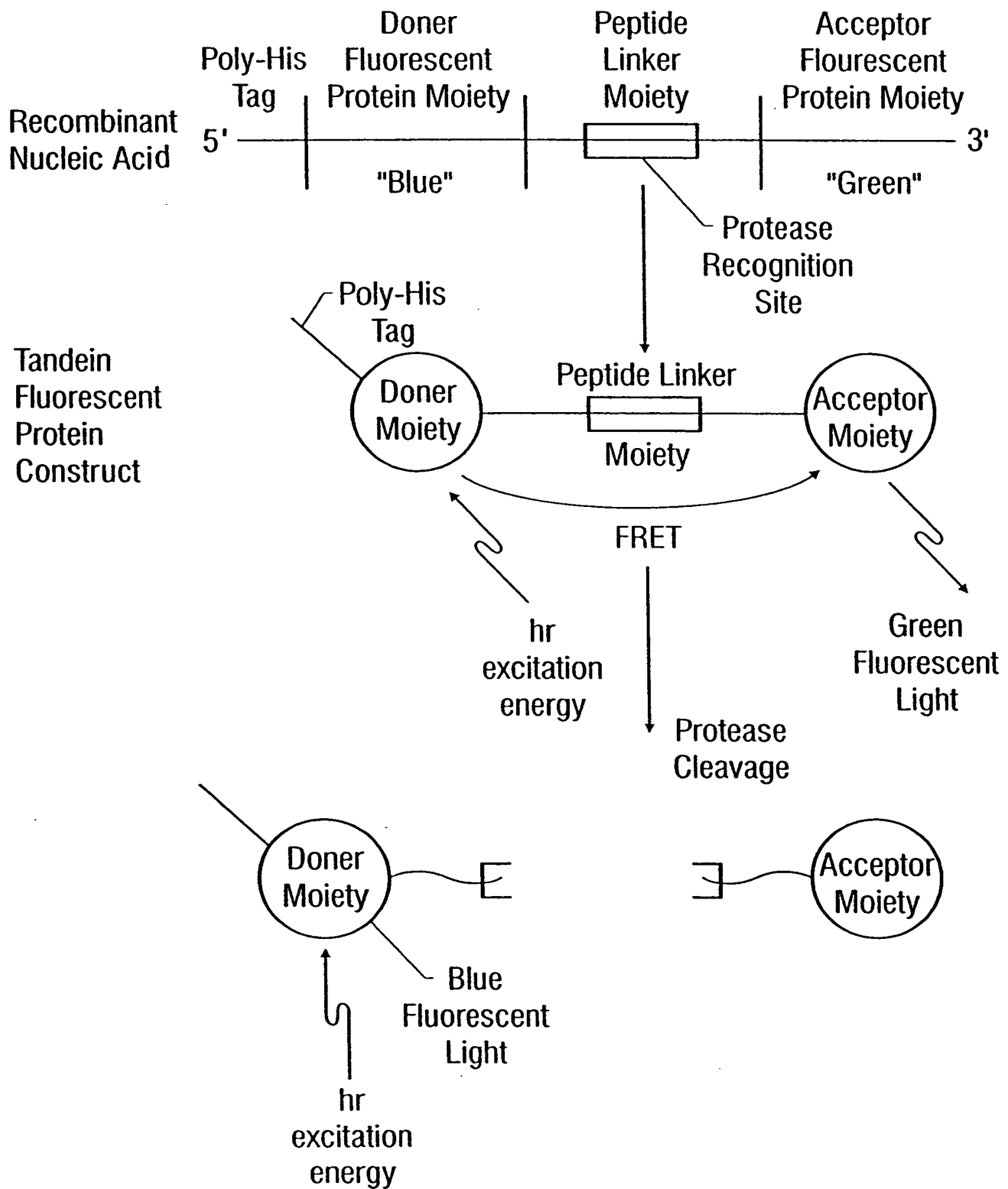


FIG. 2

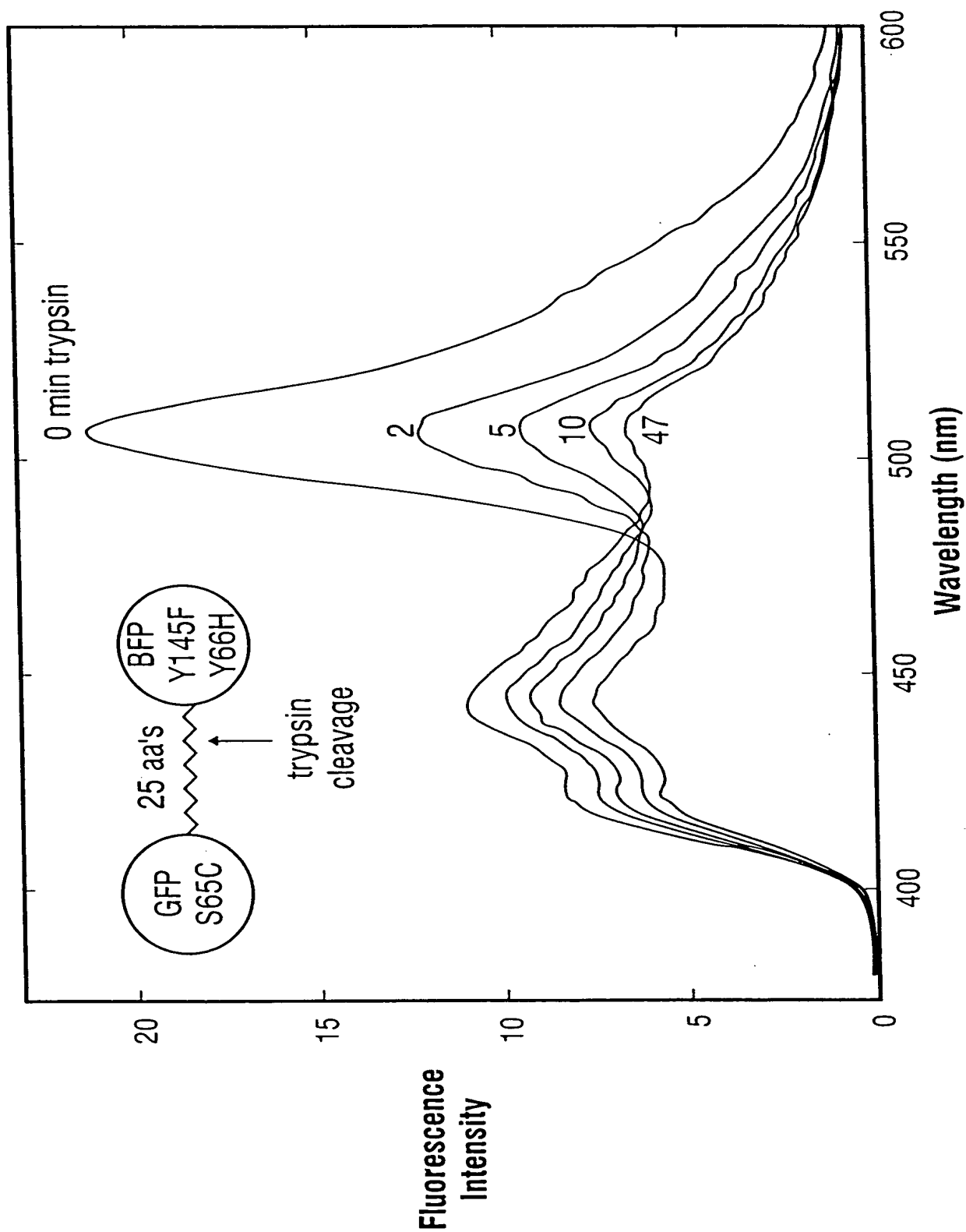


FIG. 3

|            |           |                                |          |
|------------|-----------|--------------------------------|----------|
| <b>SPE</b> | CLC7.SPT  | P43/S65T1mMEGTA2ulcalp18' ex36 | 11/28/95 |
| 12:34      | CLC8.SPT  | P43/S65T1mMCA2ulcalp2' ex36    |          |
|            | CLC9.SPT  | P43/S65T1mMCA2ulcalp6' ex368   |          |
|            | CLC10.SPT | P43/S65T1mMCA2ulcalp15' ex368  |          |

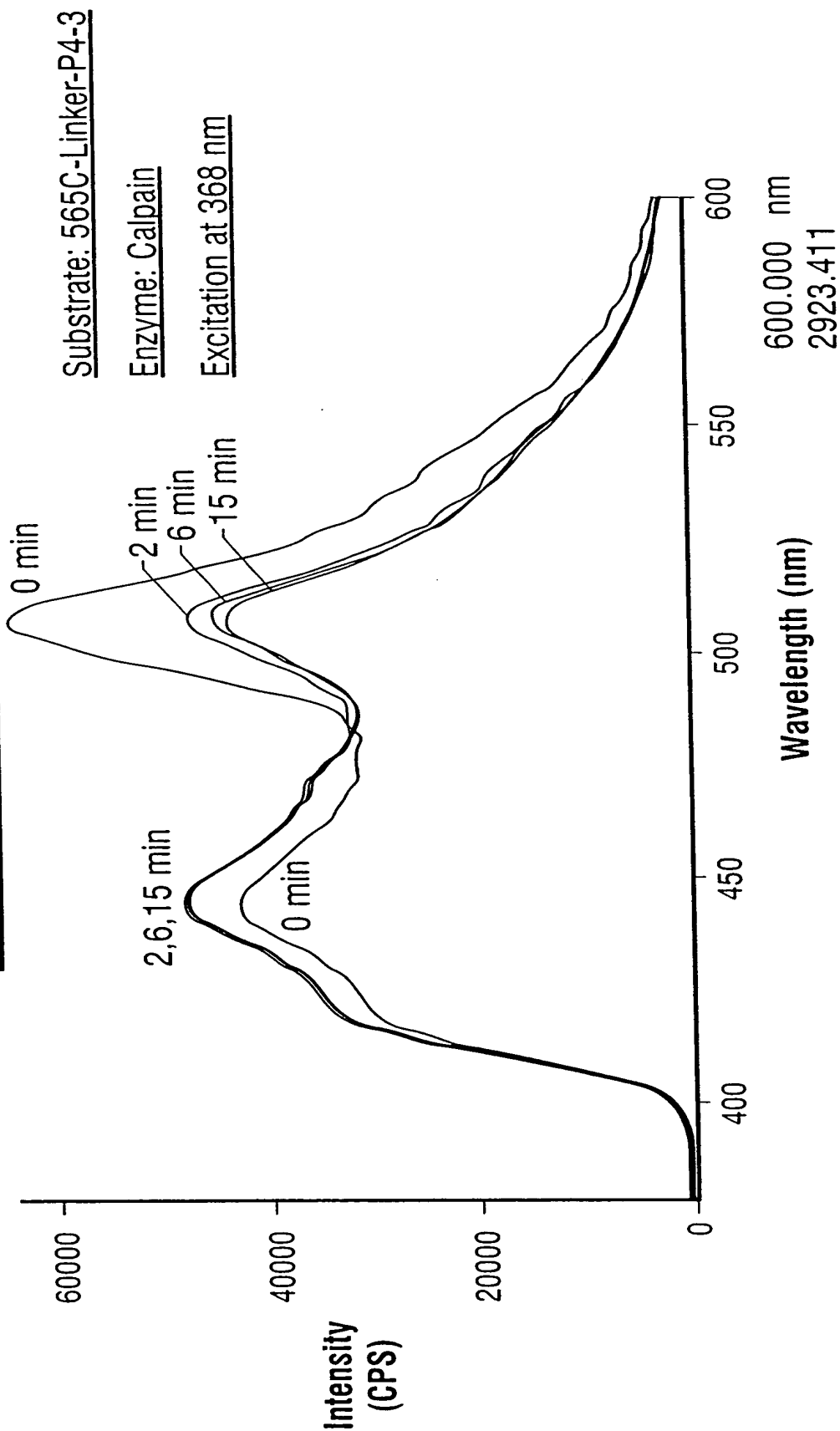


FIG. 4

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|            |   |                                |
|------------|---|--------------------------------|
| <b>SPE</b> |   | fusS65C/P4HPLCex368En144' 4/12 |
| 8:09       | □ | FUSE6.SPT                      |
|            | □ | FUSE5.SPT                      |
|            | □ | FUSE2.SPT                      |
|            | ▨ | FUSE1.SPT                      |

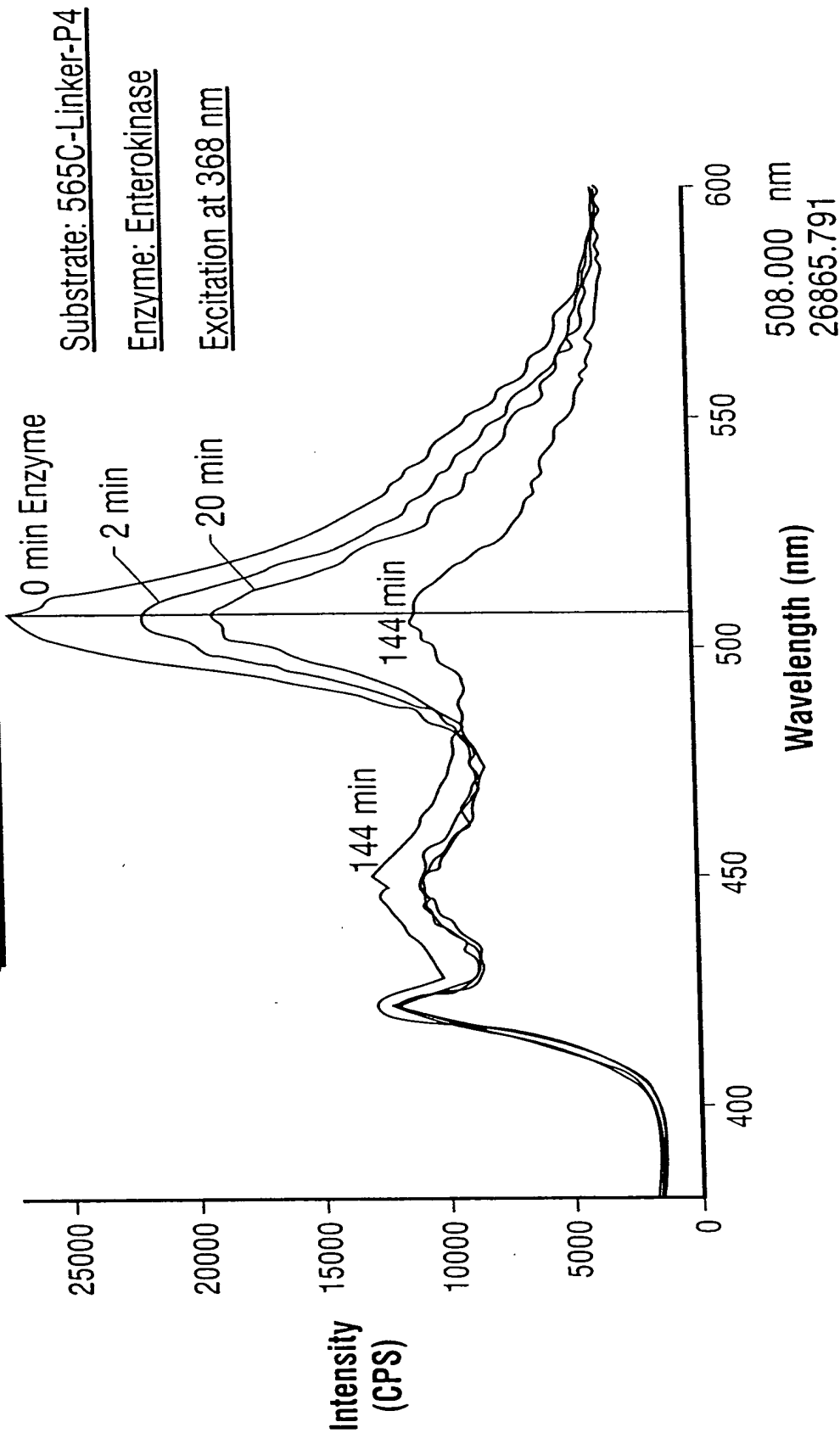


FIG. 5

**SPE** ☐ SW744.SPT S65T/W7 HPLCex432 + try 6/6/95  
4:31 ☐ SW743.SPT S65T/W7 HPLCex432 6/6/95

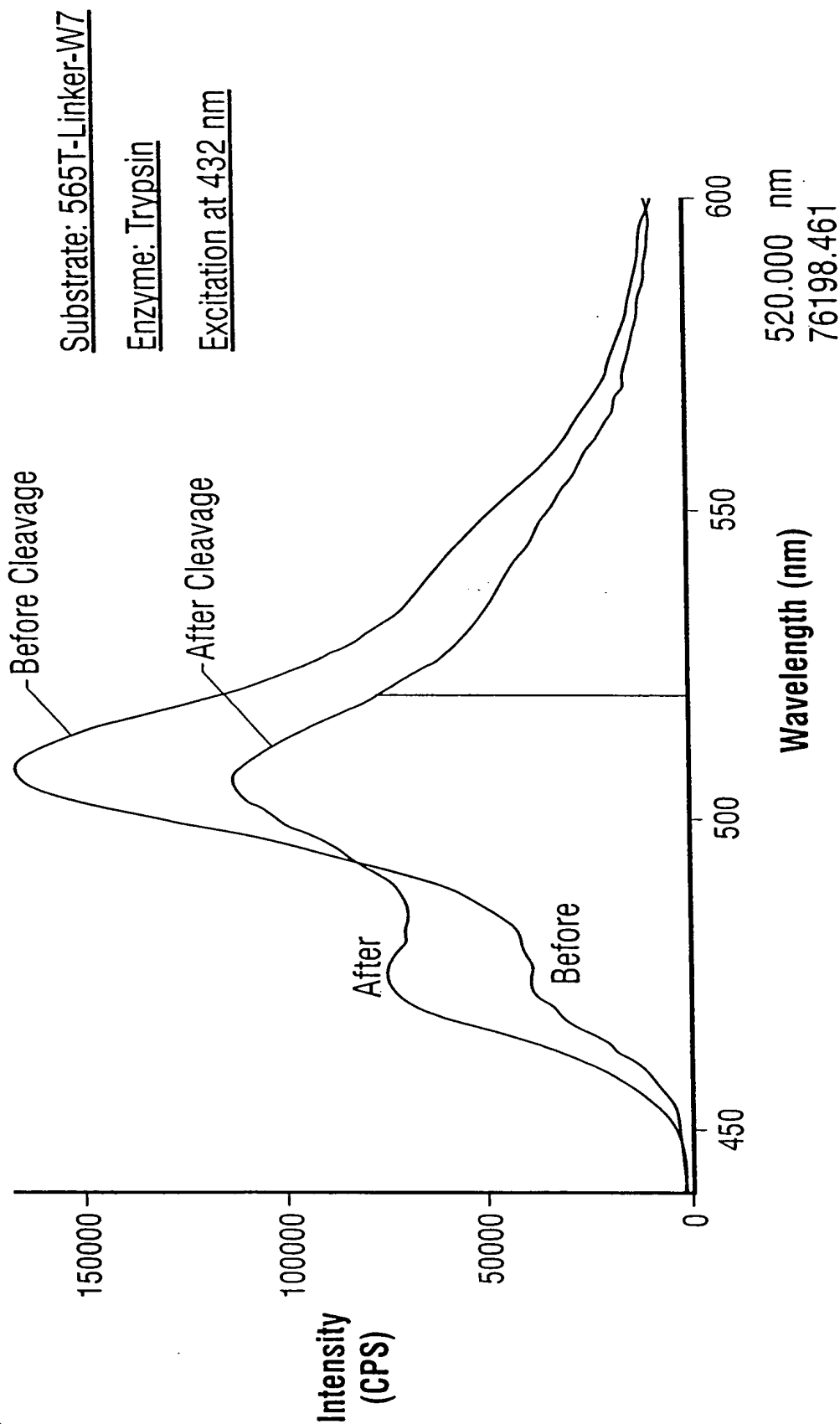


FIG. 6

**SPE** ☒ P3W742.SPT P4-3/W7HPLCex368+try 6/6/95  
5:46 ☐ P3W74.SPT P4-3/W7HPLCex368 6/6/95

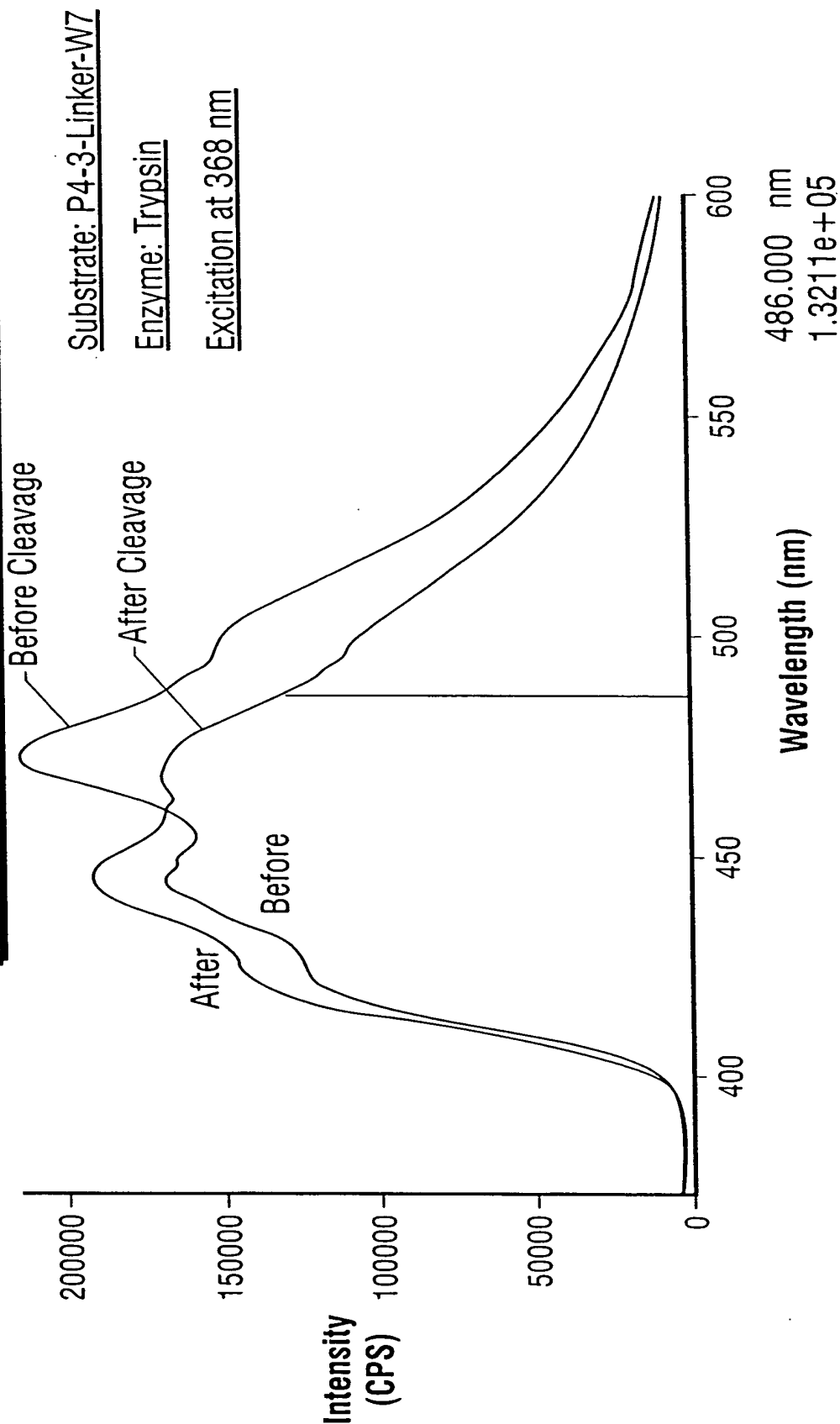


FIG. 7



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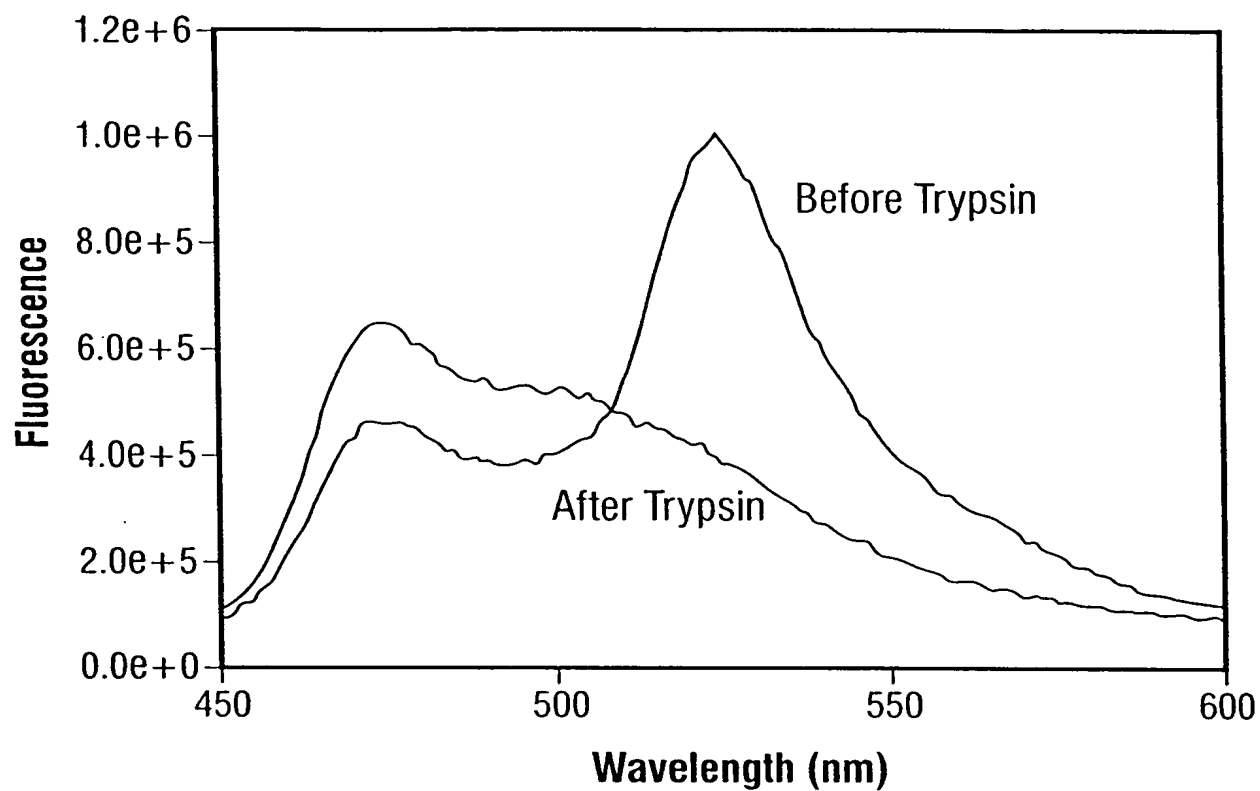


FIG. 8

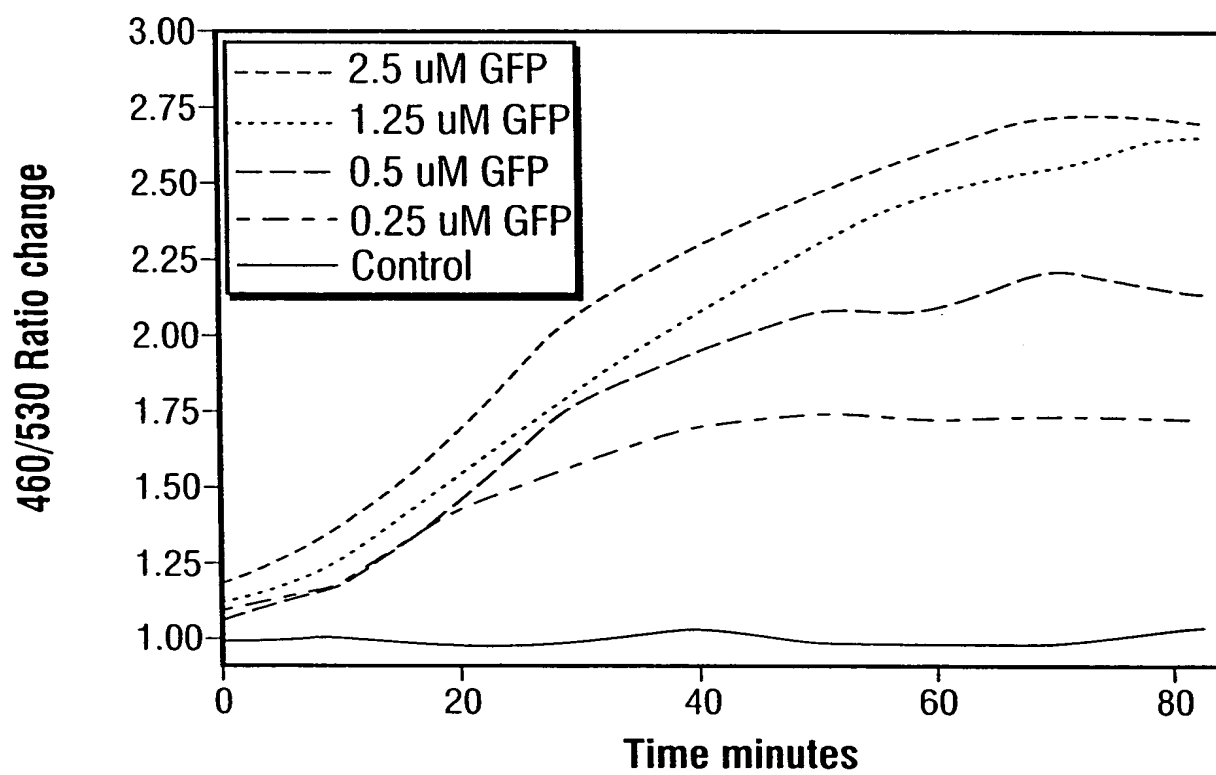


FIG. 9

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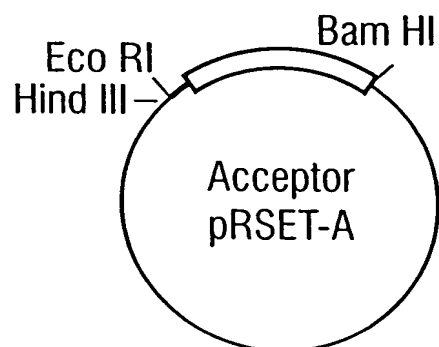
### PCR to add randomized linker

Fluorescent protein moiety

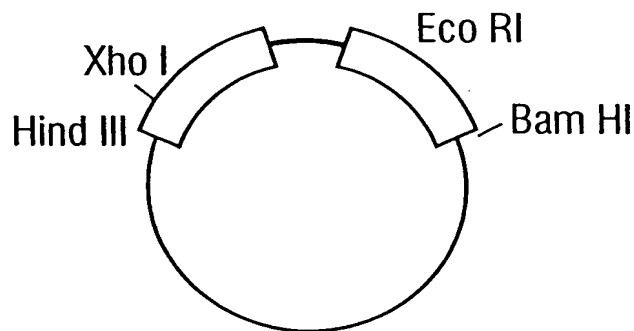
Hind III



Randomized linker



Subcloning into expression cassette containing acceptor fluorescent protein



Transfection and Screening in cells to identify sequences that are cleaved when co-expressed with the target enzyme

FIG. 10

10057505.012502